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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,547	03/26/2004	Patrick Thompson	2316.926USRE	9367

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MERCHANT & GOULD PC  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER
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CONNELLY CUSHWA, MICHELLE R

ART UNIT	PAPER NUMBER
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2874

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/810,547	<b>Applicant(s)</b> THOMPSON ET AL.	
	<b>Examiner</b> Michelle R. Connelly-Cushwa	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-16, 35-39 and 49-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 12-16, 35-39, 50, 51 and 53-68 is/are allowed.
- 6) ☒ Claim(s) 1, 4-9, 49 and 52 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/27/06, 11/03/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 8, 2006 has been entered.

### ***Response to Amendments***

Applicant's Amendments filed December 27, 2006; November 3, 2006; October 27, 2006; and September 8, 2006 have all been fully considered and entered.

### ***Information Disclosure Statement***

The prior art documents submitted by applicant in the Information Disclosure Statements filed on November 3, 2006 and October 27, 2006 have all been considered and made of record (note the attached copies of form PTO-1449).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 4-9, 49 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrunia (US 5,212,761) in view of Arasi, Jr. (US 4,652,072).**

Regarding claims 1 and 52; Petrunia discloses a connection module (10) in Figures 1 and 2, the connection module (10) comprising:

- a housing including
  - o a front (16, 17),
  - o two mounting flanges (the mounting flanges extend from the tops and bottoms of front panels 16 and 17, wherein push fasteners 34 are located in holes in the mounting flanges),
  - o a rear of the housing spaced apart from the front (the rear of the housing is the curved wall of the module);
  - o a top (13) spaced apart from a bottom (15), the top and bottom spaced apart from the mounting flanges, and
  - o opposed spaced apart sides (11, 12);
- a plurality of connection locations having exposed openings along the front (connectors, 20 and 30, are located at the plurality of connection locations); and
- the bottom, the rear, and the opposed sides defining a cable notch region (the cable notch region is channel 14), wherein the cable notch region defines an opening (port 40) for receiving a first cable (21).

Petrunia does not disclose a cable clamp mounted on and extending from the rear of the cable notch region.

Arasi, Jr. discloses a clamp (29) that is attached to a housing of a cable-connector assembly of a multiple connection device. Arasi, Jr. teaches that the clamp

provides adequate stress relief for the cables by providing an appropriate length of gripping engagement and that the clamp may be conveniently disassembled to aid in replacing or repairing the cable. Since, it is well known that stress relief is important for optical fibers to prevent damage caused by stress and to preserve signal quality, one of ordinary skill in the art would have found it obvious to incorporate a clamp, as taught by Arasi, Jr. into the invention of Petrunia by mounting the clamp on the rear of the cable notch region, which forms the port where the cable enters the housing, so that the clamp extends from the rear in the direction of the cable.

Regarding claims 4-6; In the embodiment illustrated by Petrunia in Figures 1 and 2, the connection locations include a plurality of adapters, and a first cable (21) is connected to the housing by the clamp (wherein the clamp is connected to and extends from rear of the housing, as discussed above with respect to claim 1), and interior cables are optically connected to the adapters. Petrunia does not specifically state that the interior cables are optically connected to a splice/coupler/splitter and that a splice/coupler/splitter is optically connected to the first cable, however, Petrunia further teaches that splice trays, optical splitters and other components could be provided within the housing as needed (see column 4, lines 10-13). Therefore, one of ordinary skill in the art would have found it obvious to incorporate a splice or splitter in the modules disclosed by Petrunia, wherein the interior cables are optically connected to the splice or splitter and the splice or splitter is optically connected to the first cable, as suggested by Petrunia, in order to maintain optical connections between the adapters and the cable as desired, including replacing broken and/or damaged portions of optical

fiber on the interior of the module and appropriately dividing/combining optical signals as needed. Splices and splitters are optical couplers.

Regarding claim 7; Petrunia suggests all of the limitations of claim 7 as discussed above, except for specifically stating that the optical coupler/splitter is a wavelength division multiplexer. Wavelength division multiplexers are well known splitters/combiners in the art. One of ordinary skill in the art would have found it obvious to incorporate a wavelength division multiplexer, as the splitter suggested by Petrunia, in the invention of Petrunia in order to split the optical signals as desired, since wavelength division multiplexers are well known optical splitters and Petrunia teaches that splitters may be incorporated.

Regarding claims 8 and 9; Petrunia suggests all of the limitations of claims 8 and 9, as applied above, except for specifically teaching that a splice is located between the first cable and a splitter/wavelength division multiplexer. Since Petrunia suggests that splice trays, optical splitters and other components could be provided within the housing as needed (see column 4, lines 10-13), one of ordinary skill in the art would have found it obvious to use any combination of these elements as needed. Therefore, one of ordinary skill in the art would have found it obvious to incorporate a splice between the first cable and a splitter in the invention Petrunia in order to maintain optical connections between the splitter and the cable as desired, including replacing broken and/or damaged portions of optical fiber on the interior of the module and appropriately dividing/combining optical signals as needed. As discussed with respect to claim 7, wavelength division multiplexers are well known splitters and one of ordinary skill in the

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art would have found it obvious to incorporate a wavelength division multiplexer as the splitter suggested by Petrunia in the invention of Petrunia.

Regarding claim 49; the opening into the channel of the housing that defined in the cable notch region is a downwardly facing opening.

***Allowable Subject Matter***

**Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

**Claims 10, 12-16, 35-39 and 53-68 are allowed.**

The following is a statement of reasons for the indication of allowable subject matter: The prior art cited on attached form PTO-892 is the most relevant prior art known, however, the invention of claims 2, 3, 10, 12-16, 35-39 and 53-68 distinguishes over the prior art of record for the following reasons.

Regarding claims 2 and 3; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 2, wherein the adapters are positioned at an angle having a component angle in the direction of the bottom of the housing in combination with the other limitations of claim 2. Claim 3 depends from claim 2.

Regarding claims 10, 12-16 and 37-39; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 10, wherein the adapters are positioned at an angle having a first component angle that is in the direction of the rear

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portion to the front portion and a second component angle that is in the direction of the lower portion in combination with the other limitations of claim 10. Claims 12-16 and 37-39 depend from claim 10.

Regarding claims 35 and 36; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 35, wherein the adapters are positioned at an angle having a first component angle that is in the direction of the rear portion to the front portion and a second component angle that is in the direction of the lower portion in combination with the other limitations of claim 35. Claim 36 depends from claim 35.

Regarding claims 50 and 51; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 50, wherein the connection locations includes a plurality of adapters configured and arranged or connection to an optical fiber connector, the adapters positioned at an angle having a component angle in the direction of the bottom of the housing in combination with the other limitations of claim 50. Claim 51 depends from claim 50.

Regarding claims 53-57; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 53, wherein the second end of the adapters is accessible from the outside of the housing and is angled downward from the



front of the housing in combination with the other limitations of claim 53. Claims 54-57 depend from claim 53.

Regarding claims 58-64; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 58, wherein the adapters are angled such that the second ends of the adapters face downwardly in combination with the other limitations of claim 58. Claims 59-64 depend from claim 58.

Regarding claims 65-67; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 65, wherein the adapters are angled such that the second ends of the adapters face downwardly in combination with the other limitations of claim 65. Claims 66 and 67 depend from claim 65.

Regarding claim 68; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 68, wherein the adapters are angled such that the second ends of the adapters face generally in the first direction in combination with the other limitations of claim 68.

Hence, there is no reason or motivation for one of ordinary skill in the art to use the prior art of record to make the invention of claims 2, 3, 10, 12-16, 35-39 and 53-68.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 4-9, 49 and 52 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.

  
Michelle R. Connelly-Cushwa  
Patent Examiner  
January 10, 2007